

**WHAT IS CLAIMED IS:**

- 1     1.    A method comprising:  
2                incorporating a multi-port switch into a multi-node  
3                computer system; and  
4                assigning at least a first port of the multi-port  
5                switch to a first domain of the nodes.
- 1     2.    The method of claim 1 further comprising:  
2                delivering transactions that are received by the  
3                multi-port switch and are identified as associated with  
4                the first domain, to the at least a first or more ports  
5                assigned to the first domain.
- 1     3.    The method of claim 1 further comprising:  
2                connecting nodes associated with the first domain to  
3                the at least a first port assigned to the first domain.
- 1     4.    The method of claim 1 further comprising:  
2                assigning at least a second port of the multi-port  
3                switch to a second domain.
- 1     5.    The method of claim 4 further comprising:  
2                delivering transactions, which are received by the  
3                multi-port switch and are identified as associated with  
4                the second domain, to the at least a second or more ports  
5                assigned to the second domain.
- 1     6.    The method of claim 4 further comprising:  
2                connecting nodes associated with the second domain  
3                to ports assigned to that second domain.

1 7. The method of claim 1 further comprising:

2 assigning at least a third port of the multi-port  
3 switch to a third domain; and

4 connecting nodes associated with the third domain to  
5 ports assigned to that third domain.

1 8. The method of claim 7 further comprising:

2 delivering transactions, which are received by the  
3 multi-port switch and specify the third domain, to the at  
4 least a third or more ports assigned to the third domain.

1 9. The method of claim 2 further comprising:

2 monitoring broadcast transactions generated for the  
3 first domain; and

4 transmitting these broadcast transactions to only  
5 the at least a first or more ports assigned to the first  
6 domain.

1 10. The method of claim 3 further comprising:

2 maintaining the coherency of the cache memory for  
3 the first domain.

1 11. The method of claim 10 wherein said maintaining the  
2 coherency includes:

3 monitoring the caching of system memory by the nodes  
4 associated with the first domain; and

5 informing the nodes requiring a cache update that  
6 the content of the system memory they have cached has  
7 changed.

1 12. A domain partitioning process for creating multiple  
2 domains comprising:  
3 a multi-port switch containing ports; and  
4 a first domain port assignment process for assigning  
5 at least a first port of said multi-port switch to a  
6 first domain.

1 13. The domain partitioning process of claim 12 further  
2 comprising:  
3 a first domain transaction routing process for  
4 routing transactions, which are received by said multi-  
5 port switch and specify the first domain, to one or more  
6 ports assigned to the first domain.

1 14. The domain partitioning process of claim 12 further  
2 comprising:  
3 a second domain port assignment process for  
4 assigning at least a second port of said multi-port  
5 switch to a second domain.

1 15. The domain partitioning process of claim 14 further  
2 comprising:  
3 a second domain transaction routing process for  
4 routing transactions, which are received by the multi-  
5 port switch and specify the second domain, to one or more  
6 ports assigned to the second domain.

1 16. The domain partitioning process of claim 14 further  
2 comprising:

3 a third domain port assignment process for assigning  
4 at least a third port of the multi-port switch to a third  
5 domain.

1 17. The domain partitioning process of claim 16 further  
2 comprising:

3 a third domain transaction routing process for  
4 routing transactions, which are received by the multi-  
5 port switch and specify the third domain, to one or more  
6 ports assigned to the third domain.

1 18. The domain partitioning process of claim 13 further  
2 comprising:

3 a broadcast partitioning process for monitoring  
4 broadcast transactions generated for the first domain and  
5 transmitting these broadcast transactions to only the one  
6 or more ports assigned to the first domain.

1 19. The domain partitioning process of claim 13 further  
2 comprising:

3 a domain cache coherency process for monitoring the  
4 caching of system memory by the nodes associated with the  
5 first domain, and informing the nodes requiring a cache  
6 update that the content of the system memory they have  
7 cached has changed.

1 20. A domain partitioning process for creating multiple  
2 domains in a multi-node computer system comprising:  
3 a multi-port switch containing a plurality of ports;  
4 and  
5 a port assignment process for assigning at least one  
6 port of said multi-port switch to one of a plurality of  
7 domains.

1 21. The domain partitioning process of claim 20 further  
2 comprising:  
3 a transaction routing process for routing domain-  
4 specific transactions received by said multi-port switch  
5 to one or more ports assigned to the specified domain.

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1 22. A computer program product residing on a computer  
2 readable medium having a plurality of instructions stored  
3 thereon which, when executed by the processor, cause that  
4 processor to:

5 assign at least a first port of a multi-port switch  
6 to a first domain; and

7 route transactions, which are received by the multi-  
8 port switch and specify the first domain, to one or more  
9 ports assigned to the first domain.

1 23. The computer program product of claim 22 wherein said  
2 computer readable medium is a read-only memory.

1 24. The computer program product of claim 22 wherein said  
2 computer readable medium is a hard disk drive.

- 1 25. A processor and memory configured to:
- 2 assign at least a first port of a multi-port switch
- 3 to a first domain; and
- 4 route transactions, which are received by the multi-
- 5 port switch and specify the first domain, to one or more
- 6 ports assigned to the first domain.
- 1 26. The processor and memory of claim 25 wherein said
- 2 processor and memory are incorporated into a network server.
- 1 27. The processor and memory of claim 25 wherein said
- 2 processor and memory are incorporated into a workstation.

1 28. A domain partitioning system comprising:

2 a multi-port switch containing a plurality of ports;  
3 a IO hub controller connected to one of said ports;  
4 a scalable node controller connected to one of said  
5 ports;

6 at least one microprocessor connected to said  
7 scalable node controller;

8 a first domain port assignment process for assigning  
9 at least a first port of said multi-port switch to a  
10 first domain; and

11 a first domain transaction routing process for  
12 routing transactions, which are received by said multi-  
13 port switch and specify the first domain, to one or more  
14 ports assigned to the first domain.

1 29. The domain partitioning system of claim 28 further  
2 comprising:

3 a second domain port assignment process for  
4 assigning at least a second port of said multi-port  
5 switch to a second domain.

1 30. The domain partitioning system of claim 29 further  
2 comprising:

3 a second domain transaction routing process for  
4 routing transactions, which are received by said multi-  
5 port switch and specify the second domain, to one or more  
6 ports assigned to the second domain.